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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/727,159

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EXAMINER

HAMMOND, CRYSTAL L

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/727,159	Applicant(s) WALMSLEY ET AL.	
	Examiner CRYSTAL L. HAMMOND	Art Unit 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/12/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment/Arguments

1. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Kikukawa et al. (US 5,835,424) in view of Trimberger (US 5,581,198).

(1) regarding **Claim 1**:

Kikukawa discloses an integrated circuit comprising a processor and memory storing:

secret information accessible via a first address (AY0-AY3 in Fig 6), the secret information comprising a string of bit values (AY0-AY3 in Fig 6);

an inverse-string accessible via a second address (XAY0-XAY3 in Fig 6), the inverse-string comprising a string of bit values, wherein each of the bit values in the inverse-string is the logical inverse of a bit value at a corresponding bit position in the secret information (Col 6 lines 11-24),

However Kikukawa does not disclose the additional programming with code.

Trimberger, in the same field of endeavor, discloses:

the integrated circuit being programmed with code configured to:

(i) receive a request for the secret information (#303 in Fig 3); and

(ii) test whether the bit-values of the inverse string are the inverse of the bit-values at respective corresponding bit positions of the secret information (error detection and correction circuit #307 and Data valid circuitry #305 in Fig 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the code as taught by Trimberger in the invention of Kikukawa.

The motivation to have done so would have been to have increased circuit protection, security and speed by incorporating a smaller and more efficient programming code.

(2) regarding **Claim 2**:

The combination of Kikukawa and Trimberger further discloses:

configured and programmed to perform a defensive action in the event the test fails (Col 4 lines 39-46 of Trimberger-transfer of the data held in the data register is permitted if the data is not valid).

(3) regarding **Claim 3**:

The combination of Kikukawa and Trimberger further discloses:

the defensive action includes deleting or destroying some or all of the contents of the memory in the event the test fails (Col 4 lines 39-46 of Trimberger-a refresh cycle is allowed and the memory contents are overwritten).

(4) regarding **Claim 4**:

The combination of Kikukawa and Trimberger further discloses:

the defensive action includes deleting or destroying the secret information and/or the inverse string (Col 4 lines 39-46 of Trimberger-when the transfer of the inverse string is not permitted, it is overwritten with a new inverse string).

(5) regarding **Claim 5**:

The combination of Kikukawa and Trimberger further discloses:

the defensive action includes preventing the processor from executing software (See Col 1 lines 45-51 and Col 2 lines 7-20 of Trimberger-the PLD is configured and controlled by configurable logic blocks which are controlled by control bits provided by memory, therefore if the memory contents are empty, the processor will not execute any software).

(6) regarding **Claim 6**:

The combination of Kikukawa and Trimberger further discloses:

the defensive action includes resetting some or all of logic on the integrated circuit (Col 4 lines 39-46 of Trimberger).

(7) regarding **Claim 7**:

The combination of Kikukawa and Trimberger further discloses:

the first and second addresses are at the same address in the memory (entered as internal column address ICA-Col 6 lines 15-20 of Kikukawa).

(8) regarding **Claim 8**:

The combination of Kikukawa and Trimberger further discloses:

the string and inverse string are stored at different sub-addresses within the same address (Col 6 lines 34-36 of Kikukawa-both addresses are passed and stored).

(9) regarding **Claim 9**:

As to **Claim 9**, this claim differs from **Claim 1** only in that **Claim 1** is an apparatus claim whereas **Claim 9** is a method. Thus method **Claim 9** is analyzed as previously discussed with respect to **Claim 1** above.

(10) regarding **Claim 10**:

As to **Claim 10**, this claim differs from **Claim 2** only in that **Claim 2** is an apparatus claim whereas **Claim 10** is a method. Thus method **Claim 10** is analyzed as previously discussed with respect to **Claim 2** above.

(11) regarding **Claim 11**:

As to **Claim 11**, this claim differs from **Claim 3** only in that **Claim 3** is an apparatus claim whereas **Claim 11** is a method. Thus method **Claim 11** is analyzed as previously discussed with respect to **Claim 3** above.

(12) regarding **Claim 12**:

As to **Claim 12**, this claim differs from **Claim 4** only in that **Claim 4** is an apparatus claim whereas **Claim 12** is a method. Thus method **Claim 12** is analyzed as previously discussed with respect to **Claim 4** above.

(13) regarding **Claim 13**:

As to **Claim 13**, this claim differs from **Claim 5** only in that **Claim 5** is an apparatus claim whereas **Claim 13** is a method. Thus method **Claim 13** is analyzed as previously discussed with respect to **Claim 5** above.

(14) regarding **Claim 14**:

As to **Claim 14**, this claim differs from **Claim 6** only in that **Claim 6** is an apparatus claim whereas **Claim 14** is a method. Thus method **Claim 14** is analyzed as previously discussed with respect to **Claim 6** above.

(15) regarding **Claim 15**:

As to **Claim 15**, this claim differs from **Claim 1** only in that **Claim 1** is an apparatus claim whereas **Claim 15** is a method of manufacturing. Thus method of manufacturing **Claim 15** is analyzed as previously discussed with respect to **Claim 1** above.

(16) regarding **Claim 16**:

As to **Claim 16**, this claim differs from **Claim 8** only in that **Claim 8** is an apparatus claim whereas **Claim 16** is a method of manufacturing. Thus method of manufacturing **Claim 16** is analyzed as previously discussed with respect to **Claim 8** above.

(17) regarding **Claim 17**:

As to **Claim 17**, this claim differs from **Claim 1** only in that **Claim 1** is an apparatus claim whereas **Claim 17** is a method of manufacturing. Thus method of manufacturing **Claim 17** is analyzed as previously discussed with respect to **Claim 1** above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRYSTAL L. HAMMOND whose telephone number is (571)270-1682. The examiner can normally be reached on Monday Thru Friday 7:30 AM-5:00 PM Alt Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on (571) 272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Clh
10/27/2008

/Rexford N BARNIE/

Supervisory Patent Examiner, Art Unit 2819